

Reference report

AXIS residential tower block – Frankfurt/Main





Living on the highest level

Reliably smoke-free escape routes

In the new Europa Quarter being created by the developer Wilma Wohnen Süd GmbH a new "AXIS" apartment block was built. The intention is for the residents of the building to enjoy a breathtaking view of the skyline of Frankfurt above the Taunus through to the Odenwald forest area. These visual axes were what gave the apartment building its name.

In addition to the designer lobby and lounge, a particular architectural highlight is the organic effect of the south façade with its irregularly shaped balconies. The building sets standards when it comes to sustainability. One of the largest wastewater heat pumps in the world is used in this building.

The 60 metre high building complex at the western entrance to the Europa Quarter is made up of an apartment block with 19

storeys and an additional eight two-storey lofts, which are connected to the residential tower via an atrium garden. In the residential tower there are approx. 144 exclusive residential units with different sizes. From the 60 m² single AppCenter to the 500 m² luxury penthouse with unique floorplan flexibility, all options are covered.

The symbolic ground-breaking ceremony took place in November 2013. The white façade made of natural stone is unique, and the stone comes from the same quarries as the blocks of the White House in Washington D.C.

The energy in the wastewater is used ecologically and economically by the wastewater heat pump. The heat pump supplies 100% of the energy needed to heat the apartments in the winter and to reduce

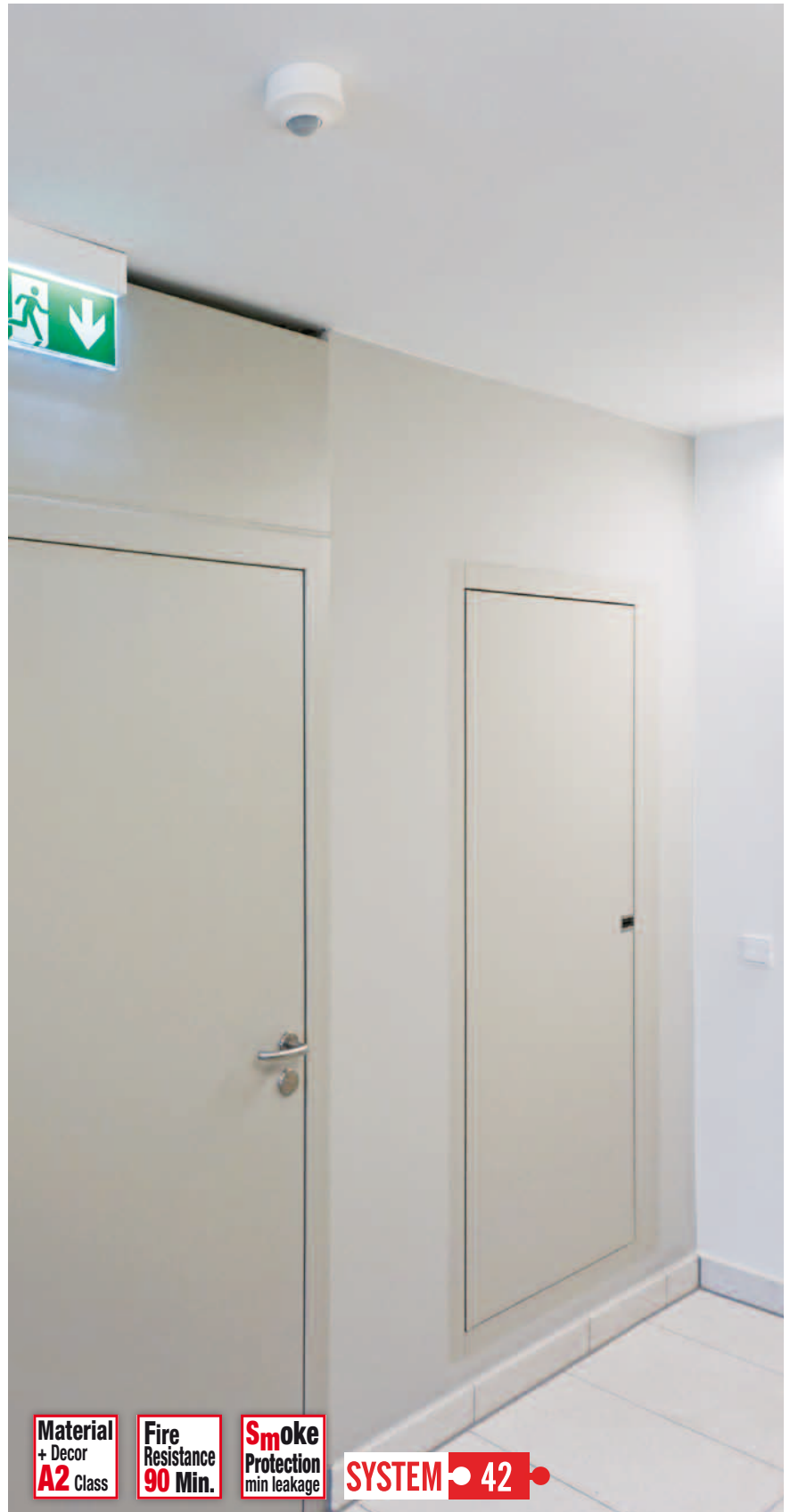
their temperature in the summer. Further measures such as a ventilation system with heat recovery, efficient LED lighting, energy recovering lifts and rainwater use round off the unique environmental concept.

The residents and guests are welcomed by a concierge in the representative entrance lobby. This concierge, known from American apartment buildings, takes care of the residents' needs. The AXIS residential also offers several other highlights, for example, an underground car park with king-size parking spaces, which can be converted into e-car filling stations on request. Furthermore, the roller shutters are accommodated inside the windows, so that they are protected from strong wind. There is a dog washing area in the AXIS so that "doggy" doesn't ruin the luxurious fixtures and finishes after their walkies.

The safety stairwells in the residential tower block were equipped with pressurised smoke protection systems (RDA) and thus offer maximum protection for evacuation in the event of a fire.

PRIORIT supplied and installed 40 PRIODOOR ETX RDA smoke extraction dampers for the outflow openings on the individual floors. The large-format, single-leaf smoke extraction dampers have been specially designed for installation in discharge shafts of pressurised smoke control systems (RDA). In the event of a fire, the PRIODOOR ETX RDA smoke control damper opens automatically via the RDA control system. Large cross-sections provide a free, unobstructed outflow area for fire and smoke gases. The smoke control damper has a white decorative surface, similar to RAL 9010, and therefore matches the interior design of the stairwells.

Project data	
Project location:	AXIS residential tower, Frankfurt/Main
Building	Residential building, new construction
Year of construction:	2013-2016
Solution:	Smoke damper PRIODOOR ETX RDA
Material:	Non-combustible panel with surface coating, classification A2 – s1, d0
Fire resistance:	90 minutes
Protection target:	Smoke control – to keep necessary staircases and escape routes free from smoke
Special features:	Outside surface in white, similar to RAL 9010



**Material
+ Decor
A2 Class**

**Fire
Resistance
90 Min.**

**Smoke
Protection
min leakage**

SYSTEM 42

PRIODOOR ETX RDA smoke control damper (right)



Solution:

PRIODOOR ETX RDA

- Smoke extraction damper for PRIODOOR ETX RDA discharge shafts

Advantages:

- Large-format smoke extraction damper
- Industrially prefabricated components
- Short construction time
- Narrow construction method

**Material
+ Decor
A2 Class**

**Fire
Resistance
90 Min.**

**Smoke
Protection
min leakage**

SYSTEM 42

Smoke control damper PRIODOOR ETX RDA (right)

PRIORIT

Fire | Resistant | Components



Entrauchungsklappe PRIODOOR ETX RDA mit vorgesetztem Schutzgitter



Smoke extraction damper PRIODOOR ETX RDA

Installation in discharge shafts of pressurised smoke protection systems



Installation of the smoke extraction damper during the construction phase

Product details at a glance

- Testing as smoke extraction damper
- Fire resistance 90 minutes
- Classification up to EI 120 (test result)
- Smoke protection
- Tight-closing
- Pressure / suction stability up to 500 Pa
- Single-leaf shaft closure with high mechanical resistance resistance
- Flush mounting in solid shaft wall with mounting frame mounting frame or in PRIOWALL wall system
- External height from 1150 mm to 2500 mm, depending on wall type
- External width from 500 mm to 1000 mm
- All-round smoke and fire protection seals, automatically foaming in the event of fire